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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,861	12/28/2000	Brad A. Davis	BEA9-2000-0015-US1	1468

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EXAMINER
PORTKA, GARY J

ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 10/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/752,861	DAVIS ET AL.
	Examiner	Art Unit	
	Gary J Portka	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 August 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-28</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 2, 9, 21, 25, and 26 were amended by Applicant. Claims 1-28 are

pending.

Claim Objections

2.   Claims are objected to because of the following informalities: In claim 9 the

second descriptor is stated to be selected from a group of descriptors, and in claim 12

the first descriptor is stated to reflect average latency; however, in claim 1 it was stated

that the second descriptor is of respective performance. Have "first" and "second" in

claims 9 and 12 been reversed? This also applies to claims 18 and 21, although both of

these state "second". In response to this objection, Applicant amended claim 9, but not

12, 18, or 21, and provided no explanation. Further, the amendment to claim 9 does not

remove the discrepancy. Appropriate correction/clarification is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Elnozahy et al., US 6,701,421 B1, in view of Sayles, US 6,549,963 B1.

5.   As to claims 1, 13, 16, and 22, Elnozahy discloses a computer system, article,

and method with multiple processors and plurality of resources assigned to node

groups, wherein a first descriptor of respective topological levels of at least one

resource is produced by firmware. See Abstract, Figs. 1 and 2, col. 1 lines 41-52, col. 2 lines 17-29, col. 4 lines 6-10 and 22-26, and col. 4 line 43 to col. 5 line 4; note that BIOS generates the configuration tables, which identifies the nodes and amount of memory, and thus the topological levels as recited. Elnozahy does not teach that the firmware also produces a second descriptor of the respective performance of the resources. However, Sayles teaches the use of firmware to initialize configuration settings that control performance as well as other characteristics of multiple devices attached to a network, thus reading on the second descriptor (see Sayles col. 1 lines 51-56, col. 2 lines 26-33, col. 2 line 55 to col. 3 line 26, and col. 5 lines 13-22 and 35-42). An artisan would have been motivated to add the second descriptor produced by firmware in the system of Elnozahy because it would have provided the advantages of control over multi-device networks to maintain signal integrity, and also the ability to change characteristics for testing purposes (see Sayles col. 1 lines 38-42, col. 2 lines 21-25, and col. 5 line 65 to col. 6 line 24). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to add the second descriptor produced by firmware, because it was a known method to control signal integrity and allow testing under changing characteristics.

6.   As to claim 2, the descriptors taught as described above may be considered first level and primary to the extent recited.

7.   As to claim 3, since the configuration table in Elnozahy maps addresses it contains a pointer to a secondary data structure.

8.   As to claims 4 and 17, each node has an identifier in Elnozahy.

9.   As to claim 5, the identifiers represent multiple interconnect levels as recited

since a node may have multiple levels (for example, processor and memory).

10.   As to claims 6-7, Elnozahy dynamically updates the descriptor as recited since

the HAL modifies the BIOS generated configuration.

11.   As to claim 8, Sayles dynamically updates the other descriptor as recited (see

col. 5 lines 65-66).

12.   As to claims 9, 18, and 25, the descriptor of the prior art combination is selected

from a group that includes descriptors of the recited elements.

13.   As to claims 10 and 19, since the descriptors of Elnozahy describe the hardware

at each node, the interconnects are reflected as recited.

14.   As to claims 11, 20, and 26, the descriptor of Sayles may be considered part of

the recited elements of the other descriptor in the combination, that of Sayles

incorporating the latency as recited.

15.   As to claims 12, 21, and 27, since transfer rates are given by Sayles, the average

latency which is directly calculable from this is reflected or maintained as recited.

16.   As to claims 14 and 15, the medium consists of both recordable storage and

modulated carrier.

17.   As to claim 23, traversing the data structure must be done in Elnozahy to use the

configuration table to identify nodes and hardware therein.

18.   As to claim 24, accessing a second data structure is disclosed in Elnozahy since

the configuration table maps addresses.

19.   As to claim 28, recursively accessing additional data structure levels is inherent

to the extent recited since data is accessed at processor and memory levels.

Response to Arguments

20.   Applicant's arguments filed August 24, 2004 have been fully considered but they

are not persuasive. Applicants have argued that there is no motivation provided in either

reference to modify the reference to add the firmware produced descriptor taught by the

other reference. However, Examiner maintains that each reference teaches

independently and thus motivates the use of its respective descriptor produced by

firmware, and thus their combination meets the claim language. It is noted that the

descriptors are not required to be in or generated by the same processor or even the

same computer, only that the two descriptors generated by firmware be in the same

computer system. As shown at Elnozahy col. 3 lines 30-40, the multimode system

therein may contain nodes that have multiple devices on a bus. Thus, the advantages

of maintaining signal integrity and other performance characteristics taught by Sayles

may be considered applicable to devices across the network of Elnozahy, or the

advantages thereof might simply be applied to devices on a bus at one of the nodes of

Elnozahy.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gary J Portka whose telephone number is (571) 272-

4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Gary J Portka
Primary Examiner
Art Unit 2188

October 25, 2004